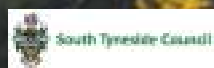


Tyne Tunnels

Environmental Statement 2003-2004



www.tynetunnel.info

Newcastle
City Council 

**A Public Environmental Statement for
Financial Year April 2003-March 2004**

An Environmental Statement produced for the Eco-Management & Audit Scheme (EMAS)

Contents

General Manager's Statement	1
Environmental Policy	2
Description of Organisation	3-4
Description of EMS	5-6
Environmental Aspects:	7
Waste	8
Energy & Water	9
Transport	10
Natural Environment & Biodiversity	11
Purchasing	12
Education & Awareness	13
Further Information	14
Contact Details	16
Feedback Form	17

Verifier's Statement

"Further to consideration of the documentation, data and information resulting from the organisation's internal procedures examined during the verification process, it is evident that the environment policy, program, management system, review (or audit procedure) and environmental statement meet the requirements of Regulation 761/01 (The EMAS Regulation)." *AJ. Thorpe*

SGS United Kingdom UK - V - 0007



General Manager's Statement

In 2003 the Tyne Tunnels made a commitment to look at our environmental performance in detail and set about implementing an environmental management system that would allow us to improve our performance in a systematic way.

The Tyne Tunnels have signed up to Newcastle City Council's Charter for the Environment and in doing so we are committed to providing an effective, efficient and high quality service while considering environmental protection as a top priority.

We see EMAS, and the use of ISO 14001 as our management system, as an opportunity to take forward our best laid plans and realise them. EMAS will allow us to involve our staff and stakeholders in our goal to continually improve our environmental performance.

This public statement explains what we have done to help protect the environment in and around the Tyne Tunnels. The information contained in this statement has been verified by an independent auditor who has inspected our policies, procedures, management programmes and systems. All this is a true account of our environmental performance.

Should you wish to talk to me or anyone here at the Tyne Tunnels about our environmental issues do not hesitate to use the contact details included on page 16 or the feedback form attached at the back of this environmental statement.

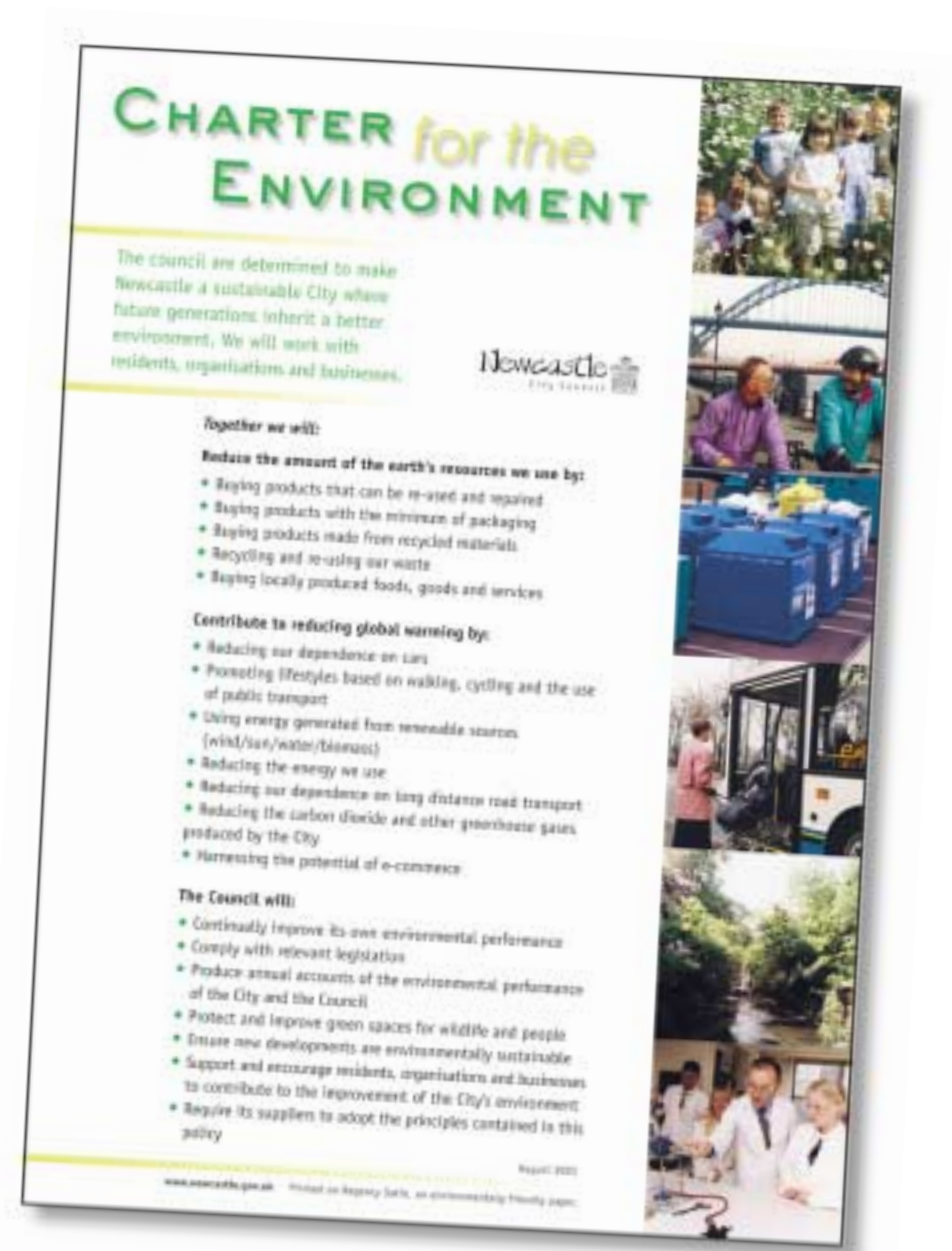


General Manager



Environmental Policy

The Tyne Tunnels have adopted Newcastle City Council's environmental policy entitled the 'Charter for the Environment'. We intend to work with the Passenger Transport Authority (PTA), local residents, organisations and businesses in promoting the ideals set out in the Charter.



The Tyne Tunnels

Background Information

The Tyne Tunnels and Tyne and Wear Passenger Transport Authority

Tyne and Wear Passenger Transport Authority (PTA) is responsible for the management and operation of the Tyne Tunnels (TT). It comprises of fifteen Local Councillors nominated by the five District Councils in Tyne and Wear, the number of nominations being determined by the population of each district. Newcastle City Council is the Lead Authority for the PTA providing support services for the Tunnels.



The Tyne Tunnels

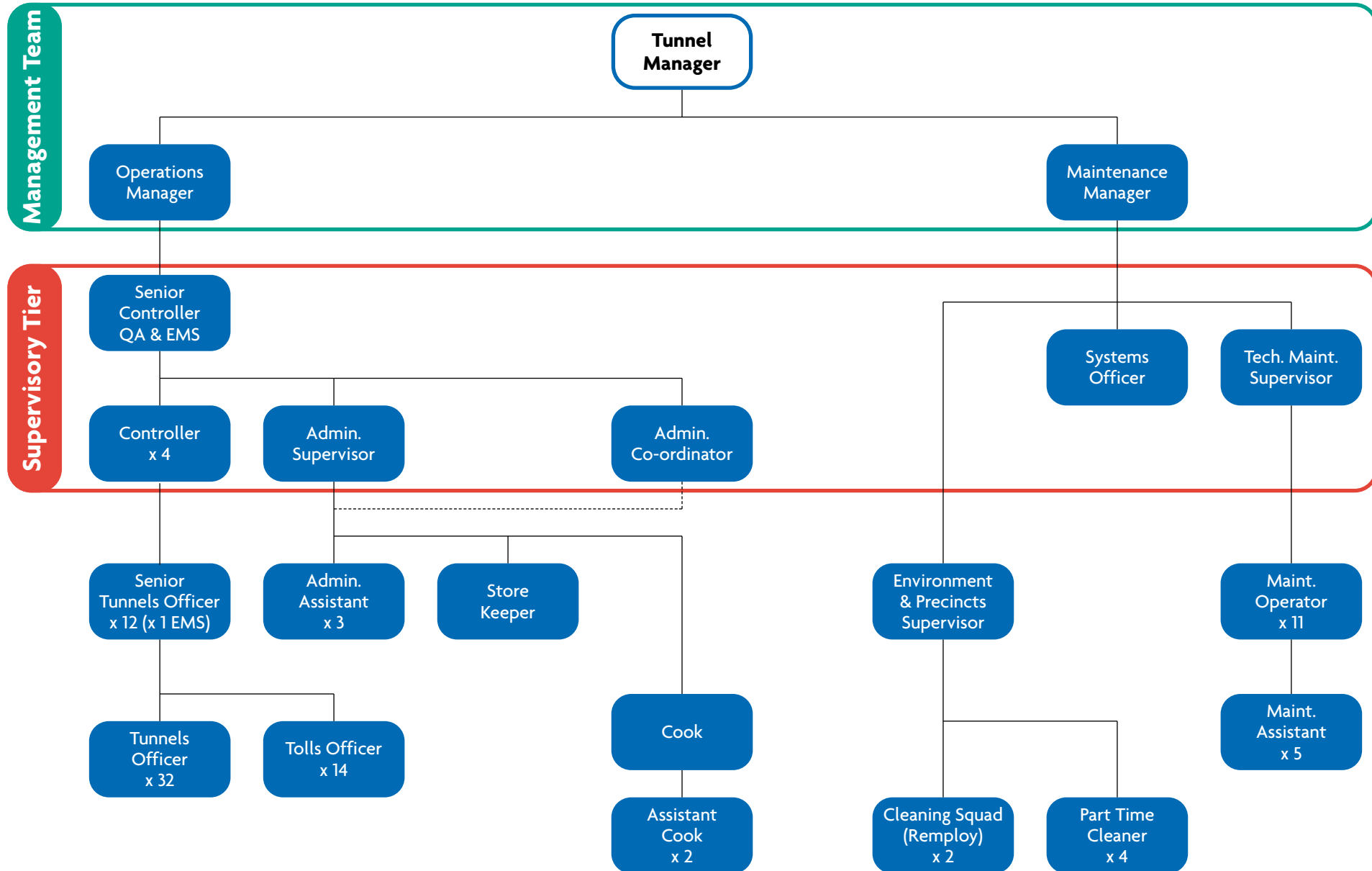
The Tyne Tunnels consist of three tunnels that run under the River Tyne connecting the communities of North and South Tyneside. These three tunnels include a pedestrian tunnel, a cyclist tunnel and the vehicle tunnel. The Pedestrian and Cyclist Tunnels were constructed between 1946 and 1951 when they were opened by Alfred Barnes MP.

They were constructed to provide a crossing for bicycle and foot customers travelling from either side of the river to do jobs in the expanding engineering and shipbuilding sectors; to join the communities and allow social and leisure journeys between Howdon & Jarrow.



The Tyne Vehicular Tunnel was developed under the direction of the Tyne Tunnels Joint Committee, made up of representatives from both Durham and Northumberland County Councils. It was constructed between 1961 and 1967 and opened to traffic by HM the Queen in October 1967. The Vehicle Tunnel's purpose was to provide a crossing of the River Tyne on the now A19 strategic corridor which directly serves Tyneside, Wearside and the Tees Valley. The Tunnels have been managed jointly by Northumberland and Durham County Councils, the Pedestrian Tunnels from 1951 to 1967, and the Vehicle and Pedestrian Tunnels from 1967 to 1974. After Local Government restructuring in 1974 the Tyne & Wear Metropolitan County Council were made responsible for the Tunnels, until 1986 when the Tyne & Wear Passenger Transport Authority (P.T.A.) took over the responsibility under the management of the Lead Authority Newcastle City Council.

Description of Organisation *continued*



What is EMAS?

EMAS is a voluntary scheme to help us improve our environmental performance. A revised EMAS was introduced in March 2001 and this incorporates ISO 14001 (an international standard which enables organisations to identify and minimise the impacts of their operations on the environment and helps to promote continual improvement of environmental performance) as its Environmental Management System (EMS). This EMS allows us to manage our environmental risks and reduce our environmental impacts.

A key feature of EMAS is communicating environmental information; this is done by producing an environmental statement, which reports on environmental performance, and making it publicly available. It is a transparent, robust, credible way of showing others our environmental improvement. EMAS is also seen as a way of demonstrating compliance with environmental legislation, as this is an integral part of the verification process.

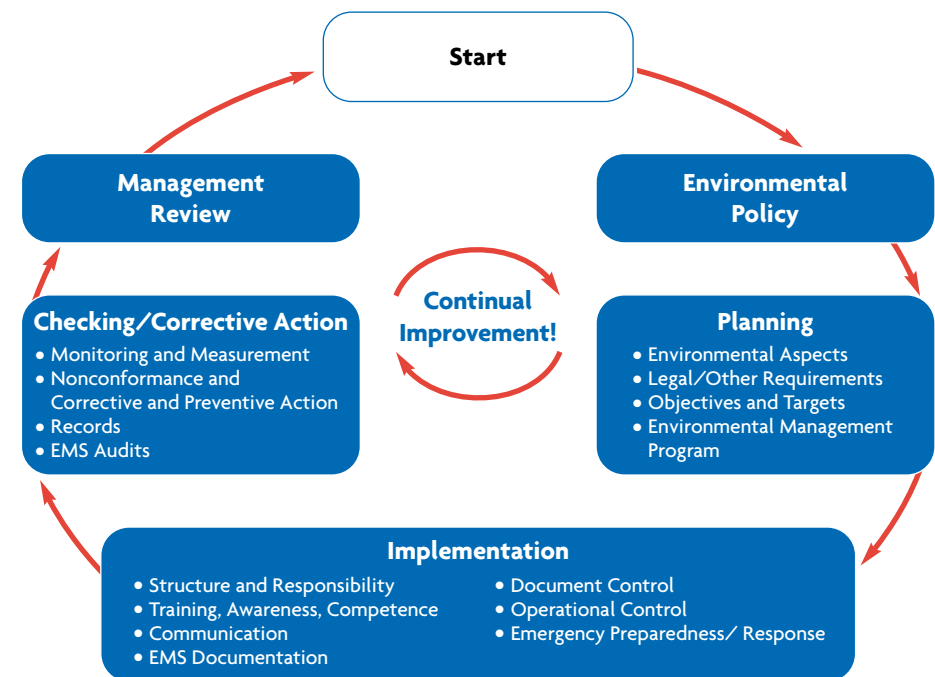
Tyne Tunnels Environmental Management System (EMS)

Requirements

The EMS has been written in accordance with ISO 14001 (see diagram) and by progressing this to EMAS, the Tyne Tunnels management aim to involve all personnel in their vision of continual environmental performance improvement.

Environmental Policy & Planning

In order to achieve the aims of Newcastle City Council's Charter for the Environment, and to contribute to the Tyne Tunnels strategies, a thorough environmental review was carried out. The method used for carrying out the review is available upon request. During the environmental review, legal obligations of the Tyne Tunnels were identified and taken into account. A register of legislation was produced that outlines the requirements of the Tyne Tunnels. This register will be reviewed on a regular basis to keep up to date with new legislation.



Description of the Tyne Tunnels' ISO 14001 EMS

EMAS Responsibilities

The **Tyne and Wear Passenger Transport Authority** accepts overall responsibility for the policies and strategies of the Tyne Tunnels, the **General Manager** accepts overall responsibility for the EMS, and the **EMAS Champions** are responsible for the overall administration of the EMS.

Implementation

Tyne Tunnels management have nominated EMAS champions to work alongside Newcastle City Council EMS support officers to drive the EMS forward in individual operational units. These staff then identify training requirements and control procedures to address the environmental impacts that have been identified.

Checking/Corrective Action

The environmental impacts that have been identified within the EMS are regularly monitored – this has enabled the data that follows to be retrieved from the EMS. Compliance to environmental legislation is also monitored. To ensure that this monitoring is effective, the EMS is subject to internal audit. An audit team from Newcastle City Council conduct a programme of audits to check that the EMS complies with the standard that it is effective and that there is legislative compliance. The findings of these audits are reported to Tyne Tunnels management who take necessary action where required.

Management System Review

Tyne Tunnels management conduct regular management and team meetings, these offer opportunities to raise environmental issues. The outcome of these meetings, when required are then acted upon or if they are wider issues, they are raised through the formal management review process. Management review meetings are conducted six-monthly and provide a health check of the entire EMS. Senior managers, EMAS champions and EMS support officers attend these reviews and discuss environmental improvements and the adequacy of the EMS. The results of these meetings are fed back into the planning stage which completes the cycle of continual performance improvement.

This is the Tyne Tunnels first EMAS environmental statement and the data that follows shall be used as baseline data for future reports.

A Description of the Tyne Tunnels' Environmental Aspects

Following an in-depth initial environmental review, carried out by Newcastle City Council EMS support officers and the Tunnels' EMAS Champions, the environmental impacts of the Tyne Tunnels were identified and then assessed for significance. The methodology behind the review consists of an initial assessment of impacts followed by a more detailed assessment of significance which takes into account; environmental legislation, relevance to the local community, and past accidents or incidents. Copies of the methodology and assessment documents are available on request.

As a result of the in-depth environmental review we have identified the following aspects which are either 'direct' or 'indirect'.

Direct aspects are environmental aspects which the Tyne Tunnels have direct management control over.

Indirect aspects are environmental aspects which the Tyne Tunnels have no direct management control over as they result from activities, products and services supplied by a third party. Direct aspects can be controlled by internal management decisions, whereas indirect aspects require the influence being put upon contractors, suppliers and customers to gain environmental benefits.

- Waste (direct)
- Energy & Water (direct)
- Transport (direct and indirect)
- Natural Environment & Biodiversity (direct)
- Purchasing (indirect)
- Education & Awareness (direct and indirect)

Environmental Aspects *continued*

Waste



Background
The Tyne Tunnels create two specific categories of waste: office waste and tunnel maintenance waste. The main waste stream coming from our maintenance work is fluorescent light bulbs of which we crushed and recycled 2.58 tonnes in the period 2003/2004 (this was an accumulation of tubes from previous years and is unlikely to be a typical annual amount). Work is now underway on a number of waste stream segregation schemes in both the office and maintenance environments.

Environmental Impact
Reducing waste through recycling decreases the demand for scarce landfill space and avoids the problems associated with this i.e. noise, smell and visual pollution.

What Tyne Tunnels are doing about it
We currently recycle newspapers and magazines, aluminium drinks cans, plastic vending machine cups, waste office paper, and lighting tubes (as seen in the photo), clothing, scrap metal and waste oil.



Performance Indicator

Waste Recycled by the Tyne Tunnels



Commentary
Waste monitoring started in January 2004. Recycling of these waste streams has occurred prior to this although no monitoring of weight was available. The above is baseline data. During 2003/2004 we also recycled 2.58 tonnes of fluorescent tubes and 200 litres of waste oil.

Future Actions Planned

- Plans are underway to substitute one of the three general waste 1100 litre skip bins situated in the maintenance yard with a skip designated for recycling waste wood/timber.

Objective: Identify possible avenues for further segregation of waste streams and implement further recycling opportunities

Action	Target Date
<ul style="list-style-type: none"> • Segregate more waste streams and raise the profile of segregation among staff 	<ul style="list-style-type: none"> • Report Annually



The following pages set out each of the aspects mentioned above in an easy to read format. They contain: an introduction to the environmental aspect and a description of what the Tyne Tunnels are currently doing to tackle it, a performance indicator for the aspect, future actions planned to improve performance in this area and examples of case studies/initiatives.

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Environmental Impact

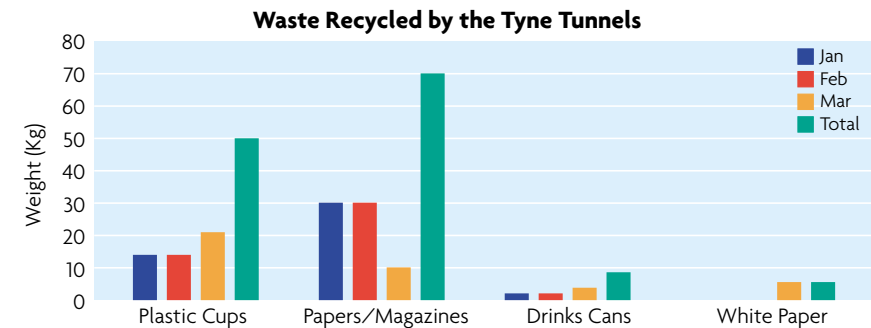
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Objective: Identify possible avenues for further segregation of waste streams and implement further recycling opportunities

Action

- Segregate more waste streams and raise the profile of segregation among staff

Target Date

- Report Annually

Energy & Water



Background

No gas is used at the Tyne Tunnels, we use only electricity and water. Our electricity is used to operate amongst many things; tunnel ventilation system, tunnel lighting, administration building, toll booths and security monitoring CCTV. Our water is used for general office use i.e. toilets and kitchens as well



as maintenance use i.e. vehicle wash and tunnel wash. We also use water when we carry out our 'hot fire drills' – so called 'hot' because we actually use fire in the drills (as pictured here).

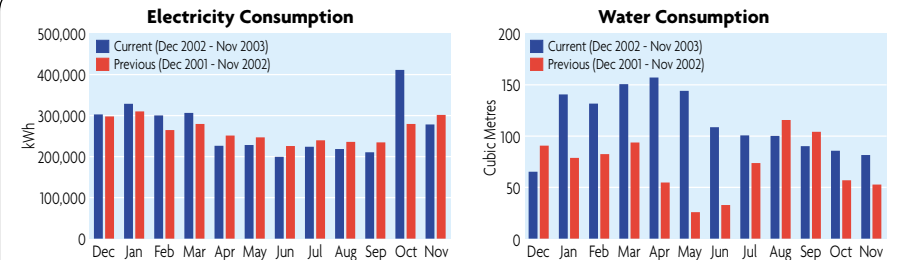
Environmental Impact

Energy, produced from burning fossil fuels such as oil, gas and coal uses finite resources and produces greenhouse gases such as carbon dioxide. These gases contribute to the greenhouse effect on the Earth, which ultimately can result in global warming and climate change.

What Tyne Tunnels are doing about it

- Office practices: awareness campaigns to urge staff to switch off lights when not in the room and turn off PC's when not being used for a length of time.
- Maintenance: limit the use of water in hot fire drills to only the amount necessary.

Performance Indicator



Commentary

Data available for December 2002 – November 2003. The increase in electricity consumption in October 2003 was due to underestimates in consumption for previous months by the supplier. The increase in water consumption between January 2003 and May 2003 was due to underestimates in consumption for previous months by the supplier.

Future Actions Planned

- In order to best monitor of energy & water consumption we plan to gather our own data by taking weekly meter readings.
- We shall investigate the feasibility of purchasing 'green' electricity – electricity generated by renewable energy.

Objective: Implement environmentally efficient office practices, with regards to the use of electricity and water

Action

- Raise awareness of office based staff and initiate good housekeeping practices

Target Date

- Report Annually

Transport



Background

Transport is a large indirect aspect for the Tyne Tunnels as our customers use their vehicles within the vehicular tunnel (approx. 38,000 a day). Our direct impact for transport is by the operation of our tunnels fleet and tunnel officers' business mileage. We have 13 fleet vehicles (12 vehicles plus one scissor platform) ranging from rapid response vehicles to mobile elevated platforms and some senior officers will travel using their own vehicles during work hours. We also store and distribute our own fuel which complies with the Control of Pollution (Oil Storage) Regulations 2001.

Environmental Impact

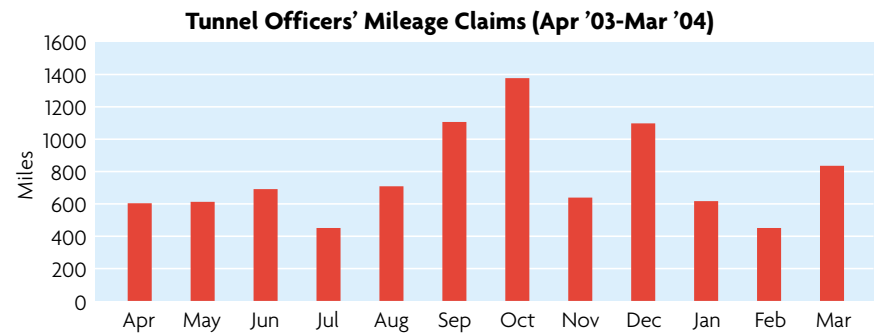
The use of transport pollutes the atmosphere with harmful gases including CO₂ as well as causing noise and visual pollution when congestion occurs.

What Tyne Tunnels are doing about it

- We monitor the internal environment of the Tyne Tunnels for various pollution data in order to maintain a healthy tunnel environment (see pages 14 & 15 for further details).
- Monitoring fleet vehicle and private work vehicle mileage (*right*).
- Driving awareness leaflet issued to all diverted traffic (*far right*).



Performance Indicator



Commentary

The above graph shows vehicle mileage for staff-owned vehicles (April 2003 – March 2004). The total fuel usage of the Tyne Tunnel fleet vehicles for the same period totalled 20,026 litres of diesel.

CO₂ Figures: Total staff mileage claimed for 2003/2004 totalled 9,201 miles which equates to 1840.2 Kg or 1.8 tonnes of CO₂. Total fleet vehicle fuel usage for 2003/2004 totalled 20,026 litres of diesel which equates to 53,669.68 Kg or 53.7 tonnes of CO₂. This means that the use of transport by the Tyne Tunnels during the period April 2003 – March 2004 generated **55,509.88 kg** or **55.5 tonnes** of CO₂.

Using DEFRA's Guidelines for Company Reporting on Greenhouse Gas Emissions (2001) and the CO₂ conversion figure for an average diesel car.

Future Actions Planned

- Monitor fleet mileage on new improved system in order to quantify all fleet mileage.
- Investigate the feasibility of including the type of fuel on all staff mileage claims to generate more accurate CO₂ figures.
- Install environmental driving sticker in all fleet vehicles.

Objective:

Ensure that fleet vehicle users are aware of environmentally friendly driving techniques

Action

- Devise environmental awareness leaflet for tunnel fleet drivers
- Issue awareness leaflet to all vehicles

Target Date

- September 2004
- October 2004

Natural Environment & Biodiversity



Background

The Tunnels have substantial areas of land surrounding the north and south portals of the vehicle and pedestrian tunnels. In the past the landscape has been kept clear of vegetation for operational reasons. However as part of EMAS and we plan to enhance the natural environment of these areas and thus increase the biodiversity of the Tyne Tunnels environment.

Environmental Impact

Correct management of the natural environment helps increase biodiversity which can be defined as the relative abundance and variety of plant and animal species and ecosystems within particular habitats.

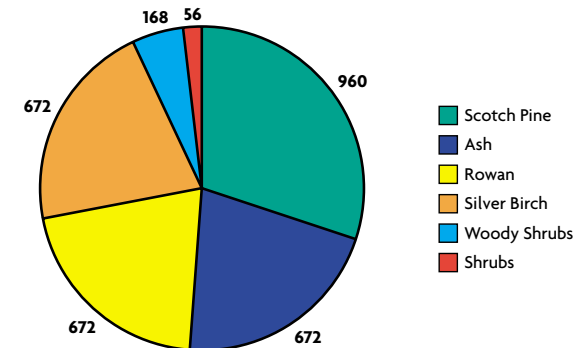
As well as increasing biodiversity it can also offset the amount of CO₂ in the atmosphere as plants and trees take in CO₂ and convert it into oxygen.

What Tyne Tunnels are doing about it

The first phase of the enhancement project is set in place: felled trees are cut into logs and piled up to create habitat for various flora and fauna, planting of new flora on the once grassed area and the introduction of nesting boxes in existing trees which has resulted in the recent habitation of a pair of Sparrow Hawks and their young.

Performance Indicator

New Trees Introduced to The Tyne Tunnels Landscape Since 2001



Commentary

This graph shows the approximate number of trees, and the types of trees, introduced into the Tyne Tunnels landscape since 2001. This introduction of species is part of the Tyne Tunnels commitment to improving its environmental performance.

Future Actions Planned

Encourage more species of flora and fauna to inhabit the landscape surrounding the Tyne Tunnels.

Investigate the feasibility of calculating a CO₂ consumption figure generated by the introduction of the new tree species, in order to offset our CO₂ production figure.

Objective:

Seek to enhance the local environment surrounding the tunnel portals

Action

- Improve the northern landscape with the introduction of a more diverse habitat

Target Date

- April 2006

Purchasing



Background

The Tyne Tunnels purchase the majority of their office supplies and equipment through Newcastle City Council purchasing department. However, some more specialist equipment will be purchased directly through the Tyne Tunnels procedures. Indirectly this can impact on the environment through the environmental performance of contractors & suppliers and the environmental characteristics of products and equipment.

Environmental Impact

A major part of EMAS is encouraging your contractors and suppliers to improve their environmental performance. By asking them to adopt our policy and encouraging them to develop their own environmental management systems we shall hopefully improve the environmental performance of others as well as ourselves.

What Tyne Tunnels are doing about it

We currently subscribe to Newcastle City Council's standing list environmental assessment process for the majority of our contractors & suppliers. To compliment this we also carry out periodical second party audits on our main suppliers & contractors.

Performance Indicator

No Performance Indicator available for this aspect.

We plan to include an indicator in next year's interim statement once baseline data has been established.

Commentary

During the review process it was identified that we were lacking in our assessment of our contractors and suppliers environmental performance and indeed the environmental characteristics of our equipment and materials. Due to this we have set plans in place (outlined below) to improve our performance in this area and should be able to report on a performance indicator for this indirect aspect in next year's interim environmental statement update.

Future Actions Planned

- Extend programme of second party audits.
- Compile an environmental awareness package for contractors/suppliers.
- Continue to encourage suppliers and contractors to sign up to our Charter for the Environment and develop their own environmental management system.

Objective:

Review the environmental performance of contractors and suppliers

Action

- Conduct 2nd party audits of key suppliers and contractors

Target Date

- Rolling review programme

Education & Awareness



Background

We are aware of the indirect impact of environmental awareness & education and the positive affect we can have if we make people more aware of the importance of protecting the environment. We have a proven track record of education and working with local communities and will put this to good use when striving to raise the profile of environmental issues to our stakeholders.

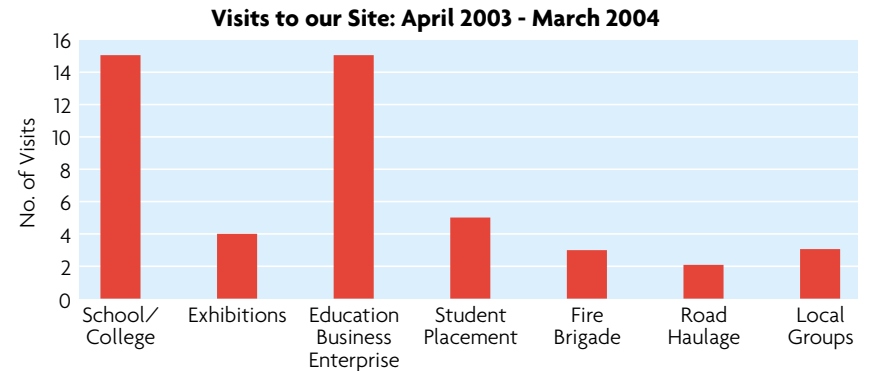
Environmental Impact

Educating our staff and stakeholders about environmental issues can have a twofold positive impact on the environment. The first is that working closely with out staff on environmental issues will hopefully improve our environmental performance. Secondly we can indirectly improve the environment by educating others i.e. school children, businesses and other organisations.

What Tyne Tunnels are doing about it

We are very pro-active in this particular aspect. We are part of the Education Business Enterprise which works with local schools. We also take part in the Tyne and Wear Heritage Weekend every year. We also strive to keep our staff aware of environmental issues as well as educating drivers we turn away from the tunnel.

Performance Indicator



Commentary

We welcome visits from all stakeholder groups and in the past year this has included: Sunderland & Northumbria Universities, local WI's, Fire Brigade, Howden Community Association, Road Haulage Association, Tynemouth College and the Miner's Welfare Association.

Future Actions Planned

- Extend the Tyne Tunnel induction package to suppliers and improve on its environmental awareness content.
- Improve upon the education packages used for school visits at present to include Tyne Tunnel environmental issues.
- Develop an EPA (environmental performance assessment) package to assess contractors and suppliers.

Objective:

Raise the environmental awareness of Tyne Tunnels' stakeholders

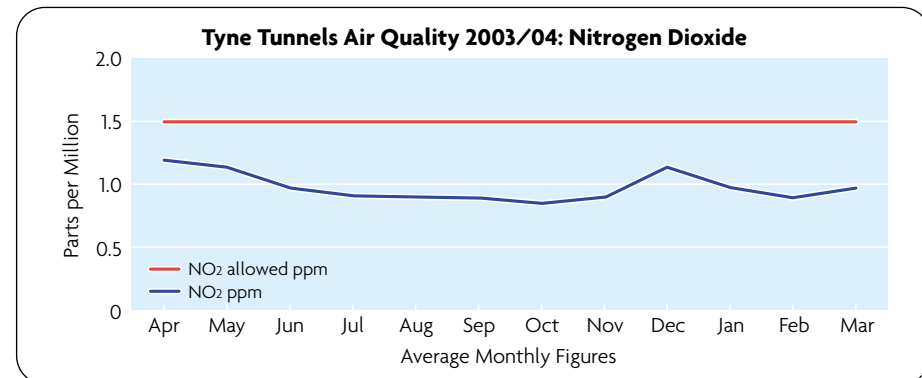
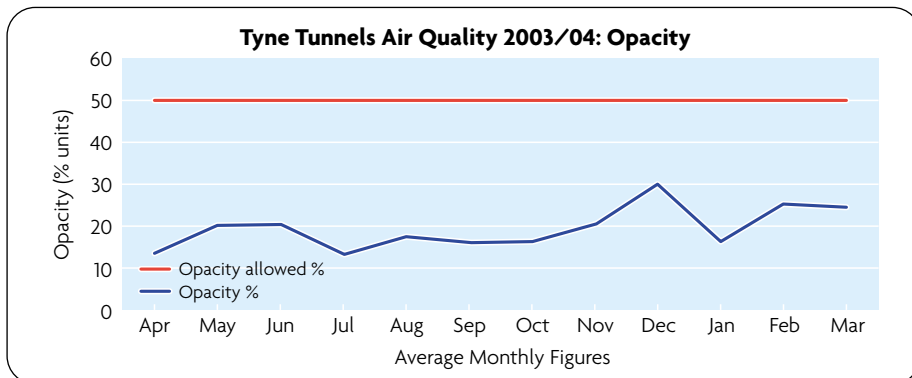
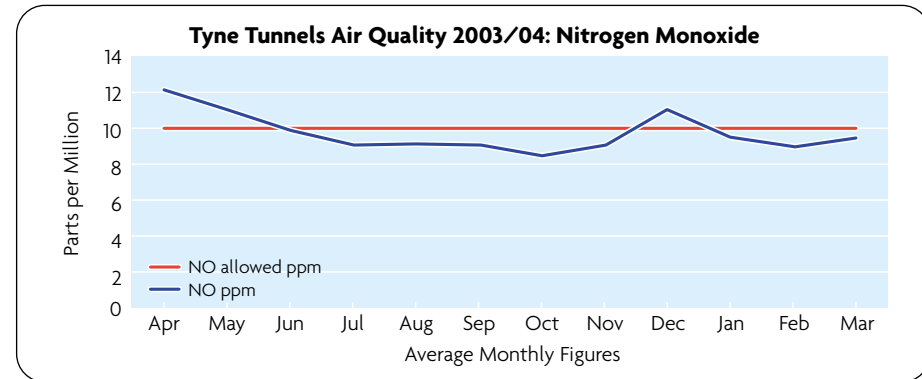
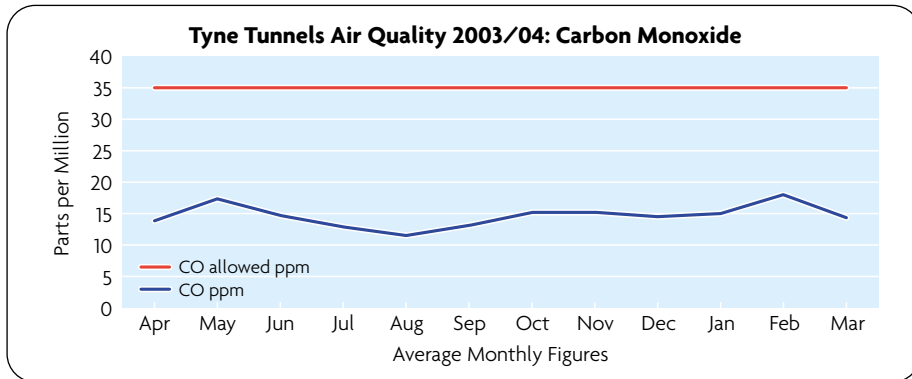
Action

- Design then distribute environmental information leaflets to re-routed drivers

Target Date

- September 2004

Tyne Tunnels Performance Against Legal Provisions



There are four considerations for air quality within road tunnels and these have set limits described in a Highways Agency Standard (Design Manual for Roads and Bridges, Volume 2, Section 2, part 9, titled 'BD78/99 Design of Road Tunnels').

The four considerations are:

1. Carbon Monoxide (CO)
2. Opacity
3. Nitrogen Monoxide (NO)
4. Nitrogen Dioxide (NO₂)

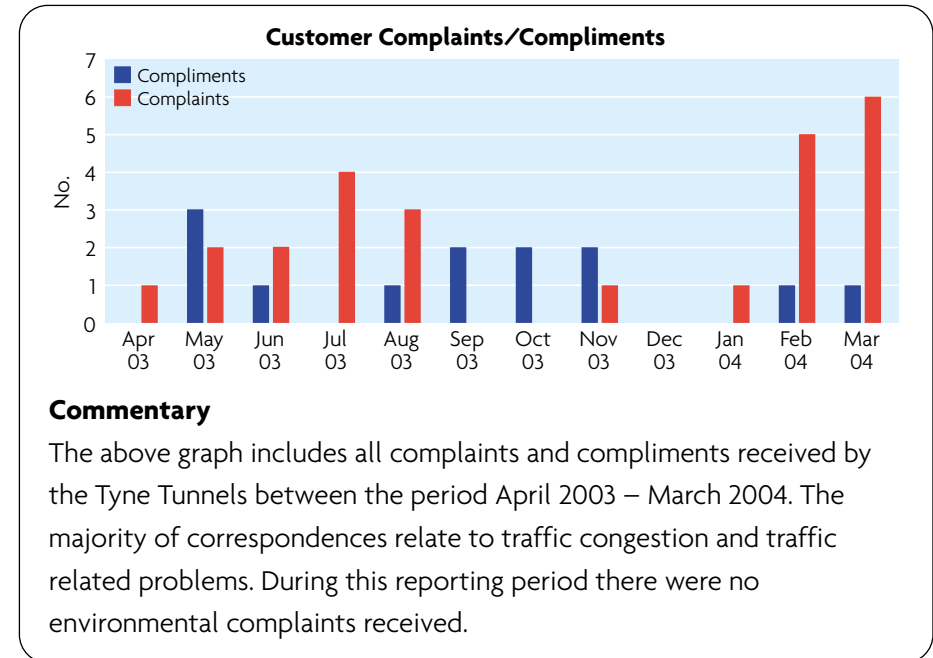
Carbon monoxide is traditionally used in road tunnels (including the Tyne Tunnels), used as a trigger to manage ventilation systems, hence for the graphs shown we are well below the limit.

Opacity is the amount that visibility can decrease due to fumes, and again we full comply.

Nitrogen monoxide and **nitrogen dioxide** have been under investigation since we began declaring these figures to meet a Best Value recommendation in approximately February 2003. The Vicotec instruments in the tunnel directly measure the first three pollutants. The instruments were calibrated using gas cells in February 2004. This monitoring will allow us to maintain compliance to BD78/99. To directly measure Nitrogen Dioxide we have portable meters installed at the key measuring points. This may result in changes to our ventilation settings.

The Health and Safety Commission publish the safe limits for toxic substances (EH40), which are used to derive the BD78/99 levels (i.e. the EH40 limit for CO is 35 parts per million – our levels do not exceed 20 parts per million). However the limits for NO and NO₂ have been withdrawn as “unsecure”. The HSE advise to work to a level of 1 part per million (8 hours time Weighted Average) for both gases, the required COSHH (Control of Substances Hazardous to Health) level. It is unlikely that any road tunnel in this country can comply with this limit, and the HSE are aware of this. The HSE are therefore carrying out a six month Regulatory Impact Assessment which began in February 2004. The Tyne Tunnels have sent data to a Senior HSE Inspector and will send further evidence of impact on the organization regarding changed levels.

Customer Complaints/Compliments



Incidents/Breaches

During the reporting period 2003/2004 the Tyne Tunnels had no known environmental incidents, breaches or prosecutions.

Contact Details

Contact Details

Should you wish to contact any Tyne Tunnels staff with regards to our EMS or any of the issues covered within this environmental statement please do not hesitate. Contact details are as follows:

Tyne Tunnels Address

The Tyne Tunnels, Wallsend
Tyne and Wear, NE28 0PD

Website

For further general information about the Tyne Tunnels (including a more detailed history of the pedestrian, cyclist and vehicular tunnels) please visit our website: www.tynetunnel.info



Tunnels Manager

Mr Peter Hedley

Telephone: 0191 262 4451

Fax: 0191 263 1031

Email: tynetunnel@twpta7.demon.co.uk

EMAS Champion



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Fax: 0191 263 1031

Email: paul.myers@newcastle.gov.uk

EMAS Champion



Mr Ron Henderson

(Senior Controller)

Telephone: 0191 262 4451

Fax: 0191 263 1031

Email: ron.henderson@newcastle.gov.uk

Feedback

Have you found this public environmental statement useful?

Do you have any suggestions about how the Tyne Tunnels could improve their management of environmental issues?

We value your feedback as a stakeholder, and any comments or suggestions about how we may improve our environmental performance are welcomed.

Please complete this form, detach along the dotted line and return to:

Lynne Walker (Senior EMS Officer)	or	Steve James (Principal QA/EMS Manager)
Newcastle City Council		Newcastle City Council
Neighbourhood Services		Neighbourhood Services
Policy & Resources		Policy & Resources
Cypress Avenue		Cypress Avenue
Newcastle upon Tyne		Newcastle upon Tyne
NE4 9JJ		NE4 9JJ

Comments:

(Continued on next page)

