10. Sustainable land use

1. Please describe the present situation and development over the last five to ten years in relation to (max. 1,000 words):

1.1. Proportion of new developments on brownfield sites

In 2007, land in Hamburg used for habitation and traffic purposes accounted for a 59.5% share of Hamburg’s total area, whereby, according to national statistical calculation methods, port land, residential gardens, green areas and recreational space are also considered habitation and traffic areas. In terms of development land, however, a statistical distinction is made between the port area (90 km$^2$ / 12%) and the remaining urban area (665 km$^2$ / 88%).

1.1.1. Port

Expansion of Hamburg’s port is intentionally not being pursued as an expansion into the surrounding area, but rather as an internal compaction through more intensive use of existing land and by generating new areas as a result of filling in expendable harbour basins.

As a consequence of the conversion of maritime traffic to container ships with higher tonnage, the current port zones to the east have become redundant and have therefore been designated as development land. Since 1997, 155 ha of the eastern port zone situated to the north of the River Elbe have been allocated for redevelopment as a residential and office area named “HafenCity” (Port City) (cf. section 1.2., 2.3. and 3.2.1.). The 45 ha large eastern port zone to the south of the Elbe in the “Kleine Grasbrook” district has also been designated as development land for residential and office use, within the scope of the “Leap across the Elbe” programme (cf. section 3.2.2.).

1.1.2. Urban area

During the period 2000 to 2007, according to statistics calculated using national standardised methods, land in Hamburg used for habitation and traffic purposes increased by 1,800 ha (= 0.25%). However, closer analysis of this figure reveals that of this land, around 400 ha result purely from statistical
reallocation, 200 ha relate to recreational areas, around 480 ha comprise port zones, and merely 720 ha relate to constructions incorporating open spaces and traffic land – only this is expansion of inhabited space within the true meaning of the term.

By contrast, since 2000 a number of projects on 197 ha of development land situated outside of the port area have already been realised.

Extensive additional development land has also been available in Hamburg for a number of years on areas formerly used by the German armed forces, German rail, the post office, industry and other institutions. Overall, this concerns a total of 616 ha (as at 1 January 2008), of which 197 ha (24%) have already been developed for alternative use, 123 ha (15%) are currently being redeveloped and 493 ha (61%) are under planning (cf. section 3.).

1.2. Population density for new developments

In Hamburg, 1,760,322 people live on an area of 75,524 ha (as at June 2007). Therefore, with 2,305 inhabitants per km² (as at 2007), Hamburg is one of the least populated conurbations in the world. This low figure is, however, primarily due to the fact that a 40.5% share of Hamburg’s urban area is designated as non-settlement land devoted to important cultural landscapes and protected areas resp. areas worthy of protection (including Natura 2000 areas). Also, the distribution of population density varies greatly in the 59.5% devoted to habitation and traffic areas.

294,456 individuals commute into the regional boundaries, while 86,646 commute out. The ratio of outward commuters to Hamburg’s total population is 4.9%, and 18% for inward commuters. In terms of climate protection, therefore, the number of inward commuters should be maintained at the lowest level possible, given that these commuters are synonymous with long journeys and high CO2 emissions.

The Hamburg urban area comprises the tightly packed historical heart of the city, the regional centres made up of towns and villages previously incorporated into the city district, areas of 4-5 storey blocks situated in the vicinity of the city centre, detached housing settlements located on the middle and external periphery and a number of rurally/agriculturally structured zones. As such, this structure gives rise to distinctive urban responses in terms of calculating population density.

The basis of Hamburg’s urban planning is to avoid urban sprawl and - to the greatest extent possible - prevent utilisation of existing wooded and agricultural land,
green spaces and recreational areas. For this reason, significant reserve areas (30%) within the inner city consolidation are being targeted and progressively realised through the development of vacant sites and by adding floors. New developments are each determined according to geographical location.

As one example with a high population density, attention must be drawn at this point to "HafenCity", an exceptional Hamburg city development project. Approximately one third of the net HafenCity development area of 60 ha is being used to build 5,500 residential homes for around 12,000 new inhabitants, equating to a population density of ca. 69,000 inhabitants per km² (Hamburg as a whole: 2,305 per km²).

Hamburg’s residential building policy of recent decades and, indeed, of the past ten years, also provides for new terraced and detached housing of a considerably lower population density in the peripheral urban regions, such as the new city district of Neu-Allermöhe (population density: 1,200 per km²). The high demand for such residential units - particularly by families with children - also needs to be addressed for reasons of climate protection, given that these families would otherwise locate to the environs and then be responsible for high CO2 emissions as inward commuters. That such new-build projects must be linked to the local public transport system and comply with climate-protecting building regulations goes without saying.

2. Please describe the measures implemented in the last five to ten years in relation to (max. 1,000 words):

2.1. Minimising the total area of derelict and contaminated land

Since 1979, areas of Hamburg suspected of being contaminated have been systematically recorded, inspected and cleaned up as necessary. The contaminated land register contains information on around 2,150 sites for which evidence of pollution exists. Measures to remove hazards are undertaken in two stages - the first step being clarification of the need for action (inspection and assessment), followed by the second step of subsequent decontamination.
To date, around 94 urban measures have been concluded, for which a budget of over 300 million euros has been allocated. It is anticipated that this task will essentially be completed by 2010, with mid-term funding requirements currently amounting to 16 million euros per year.

Initially, the environmental-policy goal in terms of cleaning up contaminated land was to remove hazards; since 1990, land recycling has also been added as an additional goal. Overall, the objective is to afford priority to eliminating pollution in accordance with the German Federal Soil Protection Act (decontamination).

Technologically, there has been a leap in development since the mid-1980s, with a shift away from mere excavation and dumping towards ground management and water treatment techniques, whereby the objective is to recycle the decontaminated materials. To this end, Hamburg has made a major contribution to developing new technologies, for example, through both research and development projects and pilot facilities. New standards have also been set regarding the cleaning up of contaminated areas that are inhabited, together with the associated participation of residents.

Currently, around 3,200 areas displaying hazardous changes in the soil or contamination have been identified and recorded in a register. Given the fact that the industrial redevelopment of Hamburg has long since occurred, the discovery of new contaminated areas is not anticipated. Over the past 10 years, around 40 ha of land have been recycled each year, including an iron foundry, a boatyard, a rubber factory, two gasworks, two landfill sites and two industrial plants.
In the past, the known contaminated sites have been recycled through re-utilisation of the land, and this will continue to be the case in the future.

2.2. Renovating urban land

The major development projects over the past ten years relate to:

- the former Boehm barracks in Rahlstedt. This property is now the “Rahlstedter Höhe” residential area providing 1,700 residential units on 18.4 ha.

- the former Graf-Goltz barracks. They have been converted to the “Boltwiesen” residential area with 530 residential units on 13.8 ha.

- the “Höltigbaum” troop training ground. Following closure of the barracks in 1997, the site was transformed into a nature reserve (272 ha), with a small area also redeveloped as a commercial zone (24.2 ha).

- the German military central workshops in Langenhorn. Today the site is home to the “Heidberg Villages” residential area with 311 residential units on 2.8 ha.

2.3. Increasing the number of inhabitants per ha of urbanized land area

As elucidated in section 1.2, instead of opening up new development zones on the edge of residential areas, internal urban development continually centres on exploiting the inner-city potential. As such, subsequent concentration focuses on utilisation of vacant plots and urban consolidation by building on areas already in use.

Overall, the HafenCity development is the most effective project in terms of increasing the population density of Hamburg. The area of 155 ha is being transformed into a lively inner-city district, incorporating a finely-honed utilisation mix comprising residential units, offices, recreational facilities, retail businesses and cultural facilities. Yet its size is not the only impressive aspect of HafenCity; what really sets it apart from similar urban development projects is the inner-city location and the excellent qualitative standard reflected, amongst other things, in the architectural and recreational quality, the high proportion of residential units, the patent water features and the sustainable development concept. HafenCity will expand the present city centre of
Hamburg by 40 percent within a period of approximately 20 years. The plan envisages around 5,500 residential units for up to 12,000 inhabitants and services zones creating approximately 40,000 jobs. By the end of 2007, HafenCity had already become home to 800 people, with around 1,500 working in the district and the number of those flocking to HafenCity increasing by the day. Currently, construction is making the most intensive progress in the “Dalmannkai” sub-district, where all 16 building projects involving around 125,000 m² of gross floor space are meanwhile either in progress or have been completed or occupied.

3. Please describe planned short- and long-term measures on sustainable land use (max. 1,000 words):

3.1. In line with current debate, anticipated demographic development in Hamburg and the normal requirement for renewal gives rise to a target volume of 75,000 to 90,000 residential units by 2020.

It is intended that these 75,000-90,000 residential units will be built

- on currently vacant residential development zones incorporated within land use planning (30%),
- on development locations suited to residential use and for which a commensurate policy position is in place (40%), and
- through the utilisation of urban consolidation potential within existing zones (30%)

For the period of 2009 to 2011, Hamburg’s Senate has designated the following prospective areas (F-Plan/Senate) for residential building development: 246 ha of development land and brownfield sites, 160 ha of primarily agricultural land and a small proportion of green areas / allotments. As such, the proportionate utilisation of land already currently being used for residential and traffic purposes (development/brownfield) will be considerably greater than the proportionate utilisation of non-residential land.

In terms of commercial sites, the following prospective areas have been designated (F-Plan/Senate) for development during the period of 2009 to 2011: 43 ha of development/brownfield land, 50 ha of primarily agricultural land and a small proportion of green areas / allotments. As such, the proportionate utilisation of land already currently being used for residential and traffic purposes will roughly equate to that of non-residential land.
3.2. With respect to the future of Hamburg, three major projects being undertaken by Hamburg city planning deserve separate mention: namely, the ‘HafenCity’, the ‘Leap across the Elbe’ and the ‘IBA’ International Building Exhibition 2013 that will be held in conjunction with the igs International Garden Show.

3.2.1. HafenCity (cf. sections 1.1.1. and 2.3.)

HafenCity has moved from the project planning stage to the phase of intensive realisation. Around 90% of the development sites are publicly owned (special assets “City and Port”) and the investment volume is approximately 6.3 to 6.8 billion euros (of which around 1.3 billion euros is public investment).

Following the gutting of the historical “Kaispeicher A” (Quay-warehouse A), work on the two concert halls of the Elbe Philharmonic Hamburg, a five-star hotel and 45 residential apartments will begin in the autumn of 2008. Construction of the heart of HafenCity, the “Überseequartier”, commenced with the breaking ground ceremony in September 2007. It is anticipated that the quarter, comprising approximately 275,000 m² of gross floor space, will be completed by the end of 2011. The start of 2009 will see construction commence on the southern district of the Überseequartier, following completion of the shell work for the Überseequartier station on the new U4 underground line.

3.2.2. Leap across the Elbe project

The districts situated between Hamburg and Harburg were originally islands of an inland river delta and for many years have primarily been used for industrial purposes. The “Leap across the Elbe”, from the city centre, across HafenCity, Grasbrook, Veddel and Wilhelmsburg to Harburg, forms the core of Hamburg’s urban development objectives. This opportunity to expand on centrally located land in the heart of the city is unique for a modern metropolis of millions.

Focal points of the overall project development are the HafenCity, the project for new employment milieus in the Reiherstieg area, the regeneration of Wilhelmsburg centre and the Harburg inland port (a leap across the Southern Elbe). The IBA 2013 International Building Exhibition is also one of the core projects through which the leap across the Elbe will be transformed from an urban planning draft into reality.
3.2.3. IBA 2013

The IBA 2013 breathes life into the overall concept of the leap across the Elbe. In conjunction with the igs 2013 International Garden Show, the future of the metropolis, with all its numerous facets, will be deliberated for the first time. The central issue will concern the nature of facilities that a major city should specifically offer its citizens, businesses and visitors in relation to life in the 21st century, in order to ensure that performance and quality of life become pre-eminent locational factors.

In particular, the IBA endeavours to tackle the questions of:

- how an internationally aligned urban society should present itself
- how 'inner' city suburbs can be upgraded as valuable areas of internal development
- how the challenges of climate change being faced by cities can be confronted.

Specific projects to be completed between 2008 and 2013 within the scope of preparations for IBA 2013 include:

- the “Energieberg Georgswerder” (Georgswerder Energy Hill); where a landfill site is being transformed into an energy supply site.
- the “Kirchdorfer Wiesen” meadows; where natural living space avoiding any destruction of the natural environment will be field-tested.
- the “Energiebunker Wilhelmsburg” (Wilhelmsburg Energy Bunker); where a World War II bunker is being transformed to provide roof space for photovoltaic installations.
- climate-friendly houses at Haulander Weg; here climate-friendly houses are being field-tested as a model of future urban infrastructure. Equipping the houses with a water-saving pollutant disposal system is currently being considered. This would mean that the sewage treatment plants would no longer need to purify clean water, but could be used more efficiently to dispose of harmful substances.
- “Neue Hamburger Terrassen” (New Hamburg Terraces); “terraces” are traditional backyard structures in Hamburg. The goal here is to lend old-building flair to apartments with up to 160 m² of area and unite residential and working space under one roof.
4. Please describe how the above issues can be documented in case your city is short listed to participate in the second phase of the evaluation (Documentation should not be forwarded in this phase) (max. 600 words):

- Development land database compiled by Hamburg’s Ministry for Urban Development and the Environment
- Potential development land database for residential and commercial premises
- Analysis of the HALB (Hamburg automated land registry)
- Green space database compiled by Hamburg’s Ministry for Urban Development and the Environment
- Special Investment Programme „Hamburg 2010“, concept of the leap across the Elbe, IBA GmbH (Hamburg Parliament document 18/3023 of 18.10.2005), see attachment “IBA Drs. 18-3023”
- igs 2013 International Garden Show (Hamburg Parliament document 17/4720), see attachment “igs Drs. 18-4720”
- Data and business reports on individual projects, such as HafenCity (http://www.hafencity.com/), IBA (http://www.iba-hamburg.org/de/00_start/start.php), igs (www.igs-hamburg.de)
- Map of new developments on brownfield sites (under planning / currently being redeveloped / developed for alternative use since 2000), s. attachment brownfield areas
- derelict and contaminated land (Hamburg Parliament document 18/3628 of 31.01.2006), s. attachment mobilisation of sites Drs. 18-3628; budget, see attachment “budget 2008”
  - http://www.hamburg.de/altlasten/135322/altlasten-allgemein.html,
  - http://www.hamburg.de/altlasten/140900/gefaehrdung-start.html
  - http://www.hamburg.de/altlasten/135322/altlasten-allgemein.html
  - http://www.hamburg.de/altlasten/140898/kataster.html
- renovating urban land, 