

C3, Issue 2013.11

All Rights Reserved. Authorized translation from the Korean-English language edition published by C3 Publishing Co., Seoul.

© 2013大连理工大学出版社 著作权合同登记06-2013年第320号

版权所有 • 侵权必究

#### 图书在版编目(CIP)数据

能源与绿色: 汉英对照 / 韩国C3出版公社编; 张琳娜等译. —大连: 大连理工大学出版社, 2014.3 (C3建筑立场系列丛书: 35)

书名原文: C3 Energy Concerned and Green ISBN 978-7-5611-8911-5

I. ①能… II. ①韩… ②张… III. ①建筑-节能-汉、英②建筑工程-环境保护-汉、英 Ⅳ. ①TU111. 4-62②TU-023

中国版本图书馆CIP数据核字(2014)第031593号

出版发行:大连理工大学出版社

(地址:大连市软件园路 80 号 邮编:116023)

印 刷:上海锦良印刷厂

幅面尺寸: 225mm×300mm

印 张:12

出版时间: 2014年3月第1版

印刷时间: 2014年3月第1次印刷

出版人:金英伟

统 筹:房 磊

责任编辑:张昕焱

封面设计: 王志峰

责任校对:赵姗姗

书 号:978-7-5611-8911-5

定 价:228.00元

发 行: 0411-84708842 传 真: 0411-84701466 E-mail: dutp@dutp.cn URL: http://www.dutp.cn

- 004 台中市文化中心\_SANAA
- 008 欧洲散裂源建筑\_Henning Larsen Architects + COBE +SLA 公共卫生间
- 012 Kumutoto卫生间 Studio Pacific Architecture
- 016 拉迪伯德湖远足和自行车道上的卫生间\_Miró Rivera Architects
- 020 San Vincenzo营地的公共卫生间\_Archea Associati

#### 人行天桥

- 024 张力带状桥\_Annabau
- 026 Can Gili 人行天桥\_Alfa Polaris
- 030 吻桥\_Joaquin Alvado Bañon
- 034 安仁桥馆\_ Atelier FCJZ
- 038 赫尔河人行天桥 \_ McDowell + Benedetti

# 能源与绿色

042 新型绿化挑战\_Silvio Carta

## 绿色建筑

- 044 绿色设计\_Paula Melâneo
- 050 Pachamanca住宅\_51-1 Arquitectos
- 060 Rillieux-la-Pape学校建筑群\_Tectoniques Architects
- 074 水池型亭阁\_Gluck+
- 084 Edgeland住宅\_Bercy Chen Studio
- 092 树林中的烧烤屋\_Santiago Viale + Daniella Beviglia
- 100 嘉义产业创新研发中心\_Bio-Architecture Formosana

#### 关于能源

## 有生命的建筑

- 110 有生命的建筑\_Diego Terna
- 116 卡昂服务大厦\_Remingtonstyle
- 124 Tvzeb建筑\_Traverso Vighy Architetti
- 134 儿童早教中心\_Clermont Architectes
- 142 城市生态广场\_Ecosistema Urbano
- 152 莎梨山图书馆和社区中心\_Francis-Jones Morehen Thorp
- 164 维图斯·白令创新园\_C. F. Møller Architects
- 174 零碳建筑\_Ronald Lu and Partners
- 178 Vallès Occidental废品处理厂\_Batlle I Roig Arquitectes
- 188 索引



008 European Spallation Source\_Henning Larsen Architects + COBE +SLA

#### **Public Toilets**

- 012 Kumutoto Toilets\_Studio Pacific Architecture
- 016 Lady Bird Lake Hike and Bike Trail Restroom\_Miró Rivera Architects
- 020 Public Toilet in San Vincenzo Camping Ground\_Archea Associati

#### Footbridges

- 024 Tension Band Bridge\_Annabau
- 026 Can Gili Footbridge\_Alfa Polaris
- 030 Kiss Bridge\_Joaquin Alvado Bañon
- 034 Anren Museum Bridge \_ Atelier FCJZ
- 038 River Hull Footbridge \_ McDowell + Benedetti

# **Energy Concerned and Green**

042 New Green Challenges\_Silvio Carta

## The Positive Green

- 044 Designing in Green\_Paula Melâneo
- 050 Pachamanca House\_51-1 Arquitectos
- 060 Rillieux-la-Pape School Complex\_Tectoniques Architects
- 074 Pool Pavilion\_Gluck+
- 084 Edgeland House\_Bercy Chen Studio
- 092 Barbecue in the Woods\_Santiago Viale + Daniella Beviglia
- 100 Chiayi Industrial Innovation Center\_Bio-Architecture Formosana

#### energy concerned

## **Buildings that Come to Life**

- 110 Buildings that Come to Life\_Diego Terna
- 116 Caen Services Building\_Remingtonstyle
- 124 Tvzeb\_Traverso Vighy Architetti
- 134 Early Childhood Center\_Clermont Architectes
- 142 Ecopolis Plaza\_Ecosistema Urbano
- 152 Surry Hills Library and Community Center\_Francis-Jones Morehen Thorp
- 164 Vitus Bering Innovation Park\_C. F. Møller Architects
- 174 Zero Carbon Building\_Ronald Lu and Partners
- 178 Vallès Occidental Waste Treatment Facility\_Batlle I Roig Arquitectes
- 188 Index



能源与绿色

**Energy Concerned** 

and Creen

中文版 (韩语版第351期)

韩国C3出版公社 | 编 王凤霞 于风军 李硕 蒋丽 曲艺 耿婷婷 | 译 大连理工大学出版社

大试读;需要完整PDE请访问:www.ertongbook.com

- 004 台中市文化中心\_SANAA
- 008 欧洲散裂源建筑\_Henning Larsen Architects + COBE +SLA 公共卫生间
- 012 Kumutoto卫生间 Studio Pacific Architecture
- 016 拉迪伯德湖远足和自行车道上的卫生间\_Miró Rivera Architects
- 020 San Vincenzo营地的公共卫生间\_Archea Associati

#### 人行天桥

- 024 张力带状桥\_Annabau
- 026 Can Gili 人行天桥\_Alfa Polaris
- 030 吻桥\_Joaquin Alvado Bañon
- 034 安仁桥馆\_ Atelier FCJZ
- 038 赫尔河人行天桥 \_ McDowell + Benedetti

# 能源与绿色

042 新型绿化挑战\_Silvio Carta

## 绿色建筑

- 044 绿色设计\_Paula Melâneo
- 050 Pachamanca住宅\_51-1 Arquitectos
- 060 Rillieux-la-Pape学校建筑群\_Tectoniques Architects
- 074 水池型亭阁\_Gluck+
- 084 Edgeland住宅\_Bercy Chen Studio
- 092 树林中的烧烤屋\_Santiago Viale + Daniella Beviglia
- 100 嘉义产业创新研发中心\_Bio-Architecture Formosana

#### 关于能源

## 有生命的建筑

- 110 有生命的建筑\_Diego Terna
- 116 卡昂服务大厦\_Remingtonstyle
- 124 Tvzeb建筑\_Traverso Vighy Architetti
- 134 儿童早教中心\_Clermont Architectes
- 142 城市生态广场\_Ecosistema Urbano
- 152 莎梨山图书馆和社区中心\_Francis-Jones Morehen Thorp
- 164 维图斯·白令创新园\_C. F. Møller Architects
- 174 零碳建筑\_Ronald Lu and Partners
- 178 Vallès Occidental废品处理厂\_Batlle I Roig Arquitectes
- 188 索引



008 European Spallation Source\_Henning Larsen Architects + COBE +SLA

#### **Public Toilets**

- 012 Kumutoto Toilets\_Studio Pacific Architecture
- 016 Lady Bird Lake Hike and Bike Trail Restroom\_Miró Rivera Architects
- 020 Public Toilet in San Vincenzo Camping Ground\_Archea Associati

#### Footbridges

- 024 Tension Band Bridge\_Annabau
- 026 Can Gili Footbridge\_Alfa Polaris
- 030 Kiss Bridge\_Joaquin Alvado Bañon
- 034 Anren Museum Bridge \_ Atelier FCJZ
- 038 River Hull Footbridge \_ McDowell + Benedetti

# **Energy Concerned and Green**

042 New Green Challenges\_Silvio Carta

## The Positive Green

- 044 Designing in Green\_Paula Melâneo
- 050 Pachamanca House\_51-1 Arquitectos
- 060 Rillieux-la-Pape School Complex\_Tectoniques Architects
- 074 Pool Pavilion\_Gluck+
- 084 Edgeland House\_Bercy Chen Studio
- 092 Barbecue in the Woods\_Santiago Viale + Daniella Beviglia
- 100 Chiayi Industrial Innovation Center\_Bio-Architecture Formosana

#### energy concerned

## **Buildings that Come to Life**

- 110 Buildings that Come to Life\_Diego Terna
- 116 Caen Services Building\_Remingtonstyle
- 124 Tvzeb\_Traverso Vighy Architetti
- 134 Early Childhood Center\_Clermont Architectes
- 142 Ecopolis Plaza\_Ecosistema Urbano
- 152 Surry Hills Library and Community Center\_Francis-Jones Morehen Thorp
- 164 Vitus Bering Innovation Park\_C. F. Møller Architects
- 174 Zero Carbon Building\_Ronald Lu and Partners
- 178 Vallès Occidental Waste Treatment Facility\_Batlle I Roig Arquitectes
- 188 Index

## 台中市文化中心

由妹岛和世以及西泽立卫领导的SANNA 建筑事务所成为台中市文化中心国际设计竞赛 的获奖者。

台中市文化中心是位于中国台湾省台中市中央区内的一个项目。场地位于中央公园的北侧,这座公园贯穿规划区的南北部,由于小山、不同植被以及机械设备的作用,因此拥有不同的气候分区。这座文化中心将容纳一座市美术博物馆和一座市图书馆,它们将共享公共设施,并且都将活动举办地延伸至周边的公共广场。

当功能性和文化需求从城市延伸到建筑内部时,景观也以空气,光线,花园以及平台的方式蔓延进建筑内部。一些访客可以在花园庭院的附近阅览书籍,而另一些访客则以公园为背景,来欣赏这些展品。同时,这也为工作室延至

平台创造了机会,使一些活动总是能与自然亲密接触。

建筑被分成10个不同规模的体量,每个体量都设有一个独特的功能。一些体量建在地面上,一些体量被抬高,以产生不同的阴凉的公共区域。通过抬高这些体量,建筑的不同侧面连接起来,同时使微风能够穿过建筑下方舒适的公共空间。根据这些功能需求,这些体量或靠近设置,或交叉设置,以和周围环境联系起来。例如,专题研习室里面安装了很多特殊的设备,并且和大厅以及展览区连接起来。展览区面向公园,欢迎访客来到文化中心。

整座建筑具有可渗透性,同时带有不同程度的透明性。通过将各个功能体量进行移动,许多庭院式的过渡空间由此产生,为访客带来全新的经历。访客能够看见不同层面上的活

动,因此视野遍布整座建筑。横向和纵向间的 视觉联系(复杂且充满活力的)也因此建立起来。

当人们靠近这座建筑时,一些活动便展现在立面上,通过这种方式,每次有访客经过文化中心,建筑都会给予其一个不同的印象。

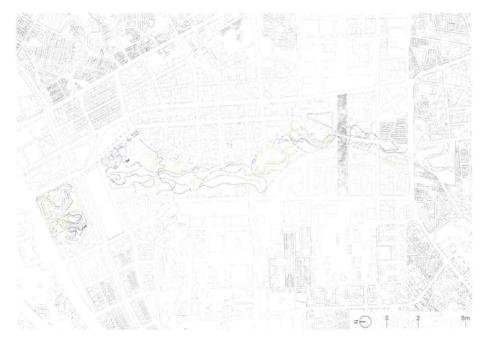
据建筑师所述,他们希望这座建筑成为景观的一部分,同时他们也希望市民成为文化中心的一个特征。在建筑内举办的活动能够透过公园甚至是这座城市显现出来。

# Taichung City Cultural Center \_ SANAA

SANAA, led by Kazuyo Sejima and Ryue Nishizawa was nominated as the winner of the Taichung City Cultural Center International Competition.

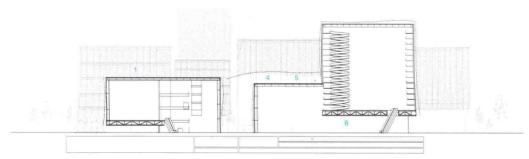
Taichung City Cultural Center is a project within the Gateway District in Taichung, Taiwan, China, The site is on the northern side of the Gateway Park that stretches from the south to the north of the master plan with many different climatic zones created by hills, a variety of trees, and mechanical devices. The Cultural Center will hold a Municipal Fine Arts Museum and a new Municipal Library, which share public facilities, as well as public plazas that extend its activities to the surroundings. While the programmatic and cultural needs extend into the building from the city, the landscape continues into the building as air, light, garden, and terraces. While some visitors are reading next to a garden courtyard, other visitors may be enjoying an exhibit with the park as the background. Also at the same time, there are opportunities for workshops to extend on to the terrace so the activities are always close to nature.

The building is divided into 10 volumes of various sizes which each holds a distinct program. Some volumes are on the ground and some are lifted to provide various shaded public spaces. By raising the volumes, the different sides of the building connect while the breeze passes through the comfortable public space below the building. According to the programmatic needs, the volumes are at times placed close by or are intersected with one another while creating relationships with the surroundings. For example, the Project Room, where many special installations take place, connects the lobby

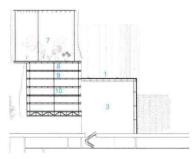




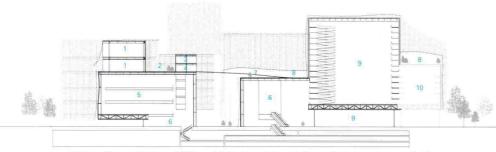




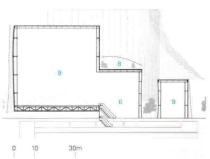
1 平台 2 专题研习室 3 大堂 4 咖啡室 5 自习区 6 阅览区 7 花园 8 研究区 9 教学区 10 行政&后勤援助区 1. terrace 2. project room 3. lobby 4, cafe 5. study area 6. reading area 7. garden 8. research area 9.education area 10. admin&support area A-A' 剖面图 section A-A'



B-B' 剖面图 section B-B'



1 展览区 2 平台 3 研究区 4 教学区 5 专题研习室 6 大堂 7 咖啡室 8 教学区 9 阅览区 10 特殊藏品区 1. exhibition area 2. terrace 3. research area 4. education area 5. project room 6. lobby 7. cafe 8. study area 9. reading area 10. special collection area C-C' 剖面图 section C-C'



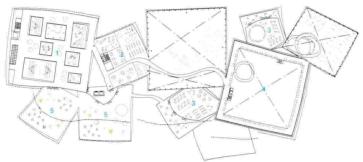
D-D' 剖面图 section D-D'

and the exhibition space. This space faces out towards the park welcoming visitors to the Cultural Center.

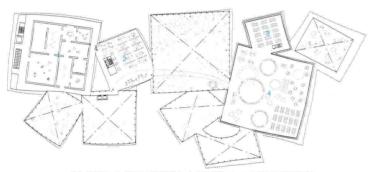
The overall building is porous with a varying degree of transparency. By shifting the volumes of program, many courtyard-like in-between spaces are created allowing for visitors to experience new encounters. Visitors see across the building through many layers of activities. Various visual relationships are made – across, above, and below – that are complex and dynamic.

When approaching the building, some activities will show through the facade. This way, each time a visitor passes by the Cultural Cențer, the building will give off a different impression.

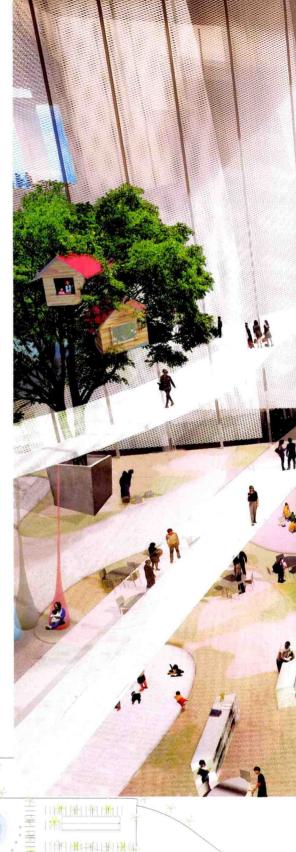
According to the architects, they hope that the architecture will become a part of the landscape and they also expect the citizen to become a part of the identity of the Cultural Center and let the activities happen within to show through to the park and further to the city.



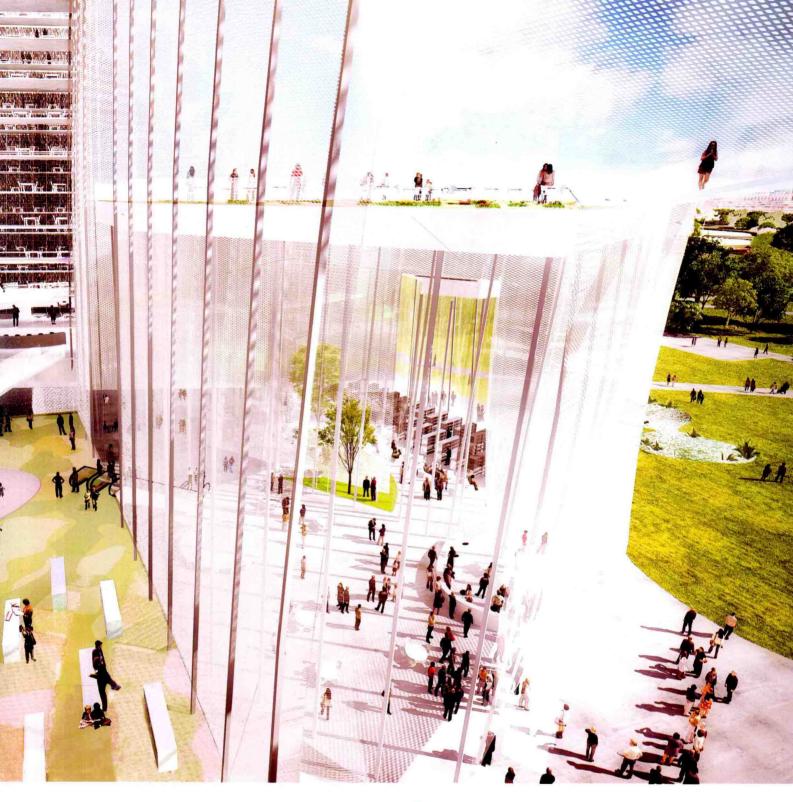
1 特殊藏品区 2 教学区 3 自习区 4 阅览区 5 平台 1, special exhibition area 2, education 3, self-study area 4, reading area 5, terrace 五层 fifth floor



1 永久展览室 2 行政&后勤援助区 3 特殊藏品区 4 多媒体&网络资源区 1. permanent exhibition area 2. admin & support area 3. special collection area 4. multimedia & internet resources area 三层 third floor







项目名称: Taichung City Cultural Center 地点: Xitun District, Taichung City, Taiwan, China 建筑师: SANAA 联合投标: Ricky Liu and Associates 结构工程师: SAPS MEP工程师: Takenaka Corporation 照明工程师: KILT Planning Office Inc. 音响工程师: Nagata Acoustics 用地面积: 26,000m² 有效楼层面积: 62,720m² 竣工时间: 2013



### 欧洲散裂源建筑



#### 建筑与景观

欧洲散裂源建筑 (ESS) 将成为世界上最大的也是最先进的以中子研究为基础的研究设施。ESS位于瑞典南部的隆德大学城内,将成为设有600m长的质子加速器形结构以及180m长大厅的一个研究园区。研究人员使用测量仪表,通过中子对所研究的物质进行分析。ESS将设置一系列研究场所,实验室、办公室以及讲堂,总共约100 000m<sup>2</sup>的区域建立起来。

ESS将成为全球研究机构的一部分。研究人员从世界各地赶来, 汇聚于此, 配以帮助他们研究的设备。他们也需要和其他研究人员会面的空间, 以及融入国际ESS网络(作为一个循环点)的一个机遇。

在ESS, 研究人员将在支持会议、横跨各学科和各研究领域的一个环境内工作。在建筑的中庭、来拜访的研究人员可以和其他人员进行非正式的会面, 以激发灵感, 交流理念、共享知识。如果天气允许的话, 室外区域也能提供大量的空间, 供人们停留。

建筑是以散裂过程中最重要的一个元素为灵感,即钨片。片和钨用作视觉隐喻元素,来标志出研究设施的中心:一个大型圆屋顶位于大厅的上方,用来支撑"钨片"。这将成为ESS园区的一个方位点,使ESS与MAX IV研究中心和隆德科学村联系起来。

根据建筑的各个功能不同, ESS区内的建筑立面也是不同的。一系列的立面理念经过发展, 能够提供不同的材料和不同程度的开放性。大厅容纳了质子加速器结构以及钨片结构, 形成封闭的立面。而该区域另一端是研究人员来往的地区, 这一地区的立面的特点是具

有高度的开放性,而材料也有高度的物质性,如木材。

这座研究中心将是半开放式的,一座访客中心将在场地建立起来,在这里,游客能够看见ESS内举办的研究活动。访客中心使这种不断变化的展览成为可能。

这个园区的平面还支持ESS未来的发展,且通过遵循一系列简单的未来扩展原则,来保持基本的规划原则。ESS将成长为一处开放的.为研究人员以及部分公众设置的研究环境。在园区,景观被用来处理ESS和隆德科学村所产生的雨水。雨水直接流入地势较低的区域.以形成新的带有湖泊.沿泽和草地的湿地。这片湿地成为一处当地景点,物种(花、鸟和虫)丰富。同时,它将形成一个屏障,成为重要的安全措施之一,而这些措施和ESS进行必要的连接。

#### 可持续性

所有实验室和办公楼的立面设计都能在室内气候,日光以及能量消耗之间形成最好的关系。房间的功能和立面的朝向经过了精细的考虑。对房间内的日光进行分析,能够为用户形成最佳的工作条件,确保低能耗。

部分园区设置了办公室和实验室,它们从风的角度进行分析,使建筑创造了一个保护场所,在传统的规划中,这个场所有可能在每年多保留2~3周。对风进行的分析也有助于提高微气候,使其对建筑能够产生积极的影响。

#### European Spallation Source

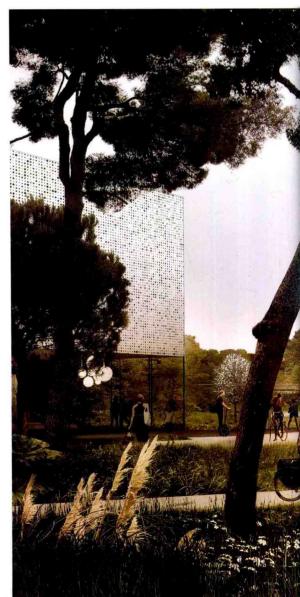
\_ Henning Larsen Architects+COBE+SLA

#### Architecture and landscape

The European Spallation Source (ESS) will

become the world's largest and most advanced research facility for neutron-based research. ESS is located in the university city of Lund in southern Sweden. ESS will be a research campus with a more than 600 metres long proton accelerator and a 180 metres long hall. In the instruments, the neutrons are used to analyse the materials that the researchers are studying. ESS will also contain a number of facilities for researchers: laboratories, offices and a lecture hall. A total of 100,000m² will be built.

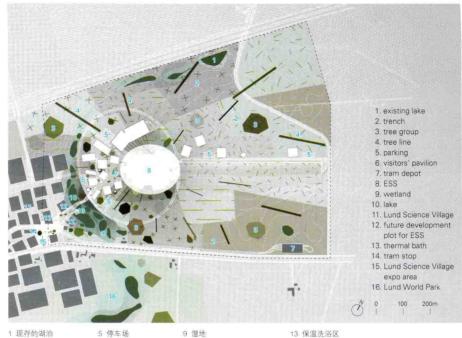
ESS will become part of a global research community. Researchers will travel there from every corner of the world, and they must be provided facilities that allow them to focus on their research. They also need spaces for meeting other researchers and the opportunity to become part of an international network with ESS as a



rotation point.

At ESS, researchers will work in a setting that supports meetings across discipline and research fields. In the atriums found in the buildings, visiting researchers will be able to meet each other informally, inspire each other, exchange ideas and share their knowledge. When the weather permits, the outdoor areas will also offer a plethora of places to stay in.

The architecture is inspired by one of the most important elements in the spallation process, the tungsten disc. The disc and the tungsten metal are used as visual metaphors that mark the centre of the research facility: a large, circular roof above the hall that holds the tungsten disc. This will become a point of orientation for the campus area at ESS, and it will make ESS stand out in relation to the research facility Max IV and Lund Science Village.





 停车场
 9 湿地

 访客亭阁
 10 湖泊

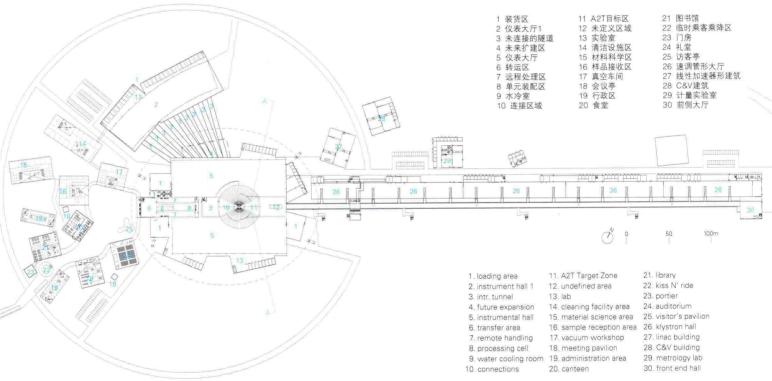
 电车停车场
 11 隆德科学村

 ESS
 12 ESS未来发展用地

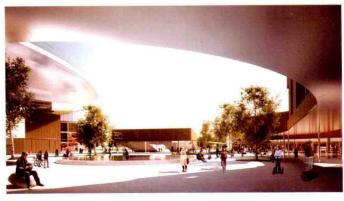
13 保温洗浴区 14 电车站 15 隆德科学村展区 16 隆德世界公园











The facades of the buildings in the ESS area vary according to the individual building function. A number of facade concepts have been developed offering different materials and degrees of openness. The halls comprising the proton accelerator and the tungsten disc offer closed, industrial facades. The facades at the other end of the area, where the researchers will move around, feature a high degree of openness and feature materials with a greater degree of materiality, e.g. wood.

The research centre will be partly open to the public. A visitors' centre will be established on the site, where visitors can gain an insight into the research activities taking place at ESS. The visitor's centre will make it possible to present changing exhibitions. The plan for the campus area supports ESS future growth and retains the basic planning principles by following a number of simple rules for future extensions. ESS

will grow as an open environment for researchers and also, in parts, for the public. In the campus area, the landscape is used to manage rainwater from both ESS and Lund Science Village. Rainwater will be directed to low-lying areas where it will create a new wetland with lakes, bogs and meadows. The wetland will become an attraction in the local area with its great diversity of flowers, insects and birds. At the same time, it will create a barrier as an important part of the security measures that are necessary in connection with ESS.

#### Sustainability

The facades on all laboratories and office buildings have been designed with a view to create the best possible relation between indoor climate, daylight and energy consumption. Consideration has been paid to the rooms' functions and the orientation of the facades. Daylight analy-

ses of the rooms help to create optimum working conditions for the users and ensure a low energy consumption.

The part of the campus area comprising offices and laboratories has been analysed in terms of wind conditions so that the buildings will create shelter and make it possible to stay outdoors for 2-3 weeks more per year than would be the case with a conventional plan. The wind analyses also contribute to improving the microclimate so that it has a positive effect on the buildings' energy consumption.

项目名称: ESS-European Spallation Source

地点: Lund, Sweden

建筑师: Henning Larsen Architects, COBE

景观建筑师: SLA

工程师: Buro Happold, NNE Pharmaplan, Transsolar

顾问: Head of Programme Bent Lauritzen,

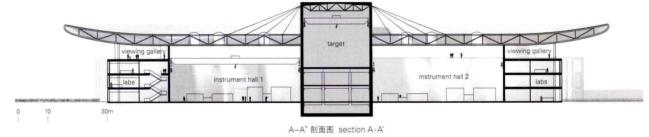
DTU Nutech

甲方: ESS-European Spallation Source

有效楼层面积: 100,000m²

施工时间: 2013—2025

获得奖项: first prize in international competition





### Kumutoto卫生间

这些卫生间位于惠灵顿海滨北端的 Kumutoto辖区内的Synergy广场上。项目书考虑 了一些实际的问题,如安全性,卫生性以及破 坏性,旨在建成一个具有雕塑形式的结构,使 之从视觉角度和历史角度都能与周围辖区的环 境融为一体.

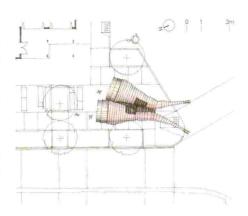
为了能够全面地观赏它,这个设计包括了 两个细长的不规则曲形结构, 从各条关键的 人行道角度望去,它们都能被辨别出来,并且 成为沿着巷道设置的一系列空间和元素的终 结点。这些有机外形十分吸引人们的眼球,给 人以瞬间的印象,同时具有甲壳类或海类生 物的形象, 使这个结构如同一种化石外壳, 曾 被人发现和栖息过。它们使人们回想起了水 滨区域曾经的过往船只。这一参考了水生物 的结构在其周围添加了一个有趣的元素,将其 本身与Kumutoto管辖区的名字起源连接起来。 Kumutoto的意思是流淌于填海陆地上的前宾夕 法尼亚地区以及古老的河流。

每个外形结构都包含一个可进出的公共 卫生间, 每两个卫生间之间还设置了清洁设 施。它们稳定的混凝土结构对于周围的海洋环 境来说十分合适。金属制成的雨屏为砖红色, 为建筑提供了保护,并且将它们联系在一起,形 成一个传统的环境,同时增强他们的视觉性。 当这些建筑与周围的线形建筑形成对比时,它 们又一次地展现了其视觉方面的不同点。新结 构的曲线也与附近小屋上的一些华丽细部相呼 应。悬挑的"尾形"结构提供了自然通风。

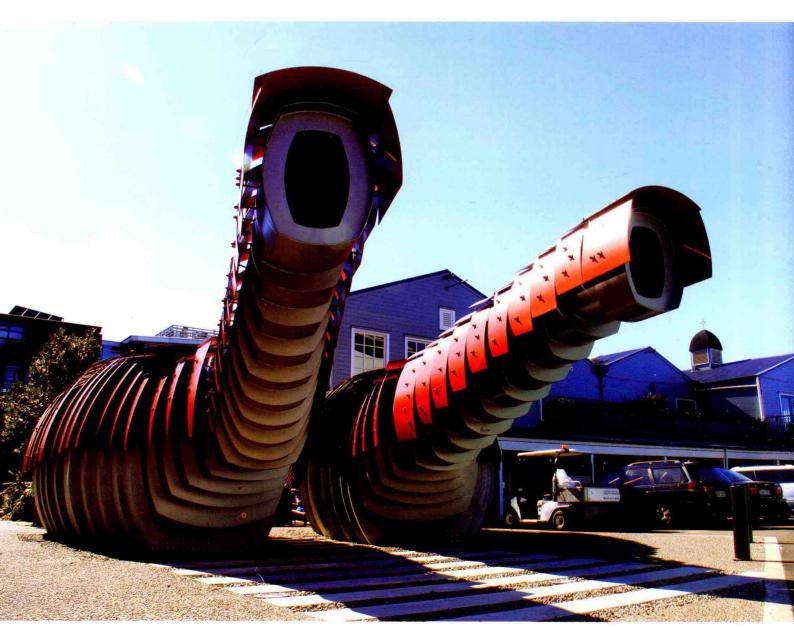
#### Kumutoto Toilets

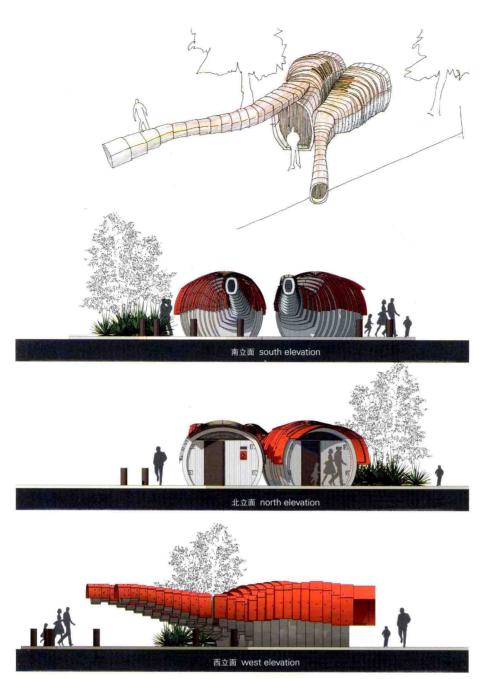
#### Studio Pacific Architecture

These public toilets are located at the Synergy Plaza in the Kumutoto Precinct, situated at the northern-most end of Wellington's waterfront. As well as taking into account practical considerations such as security, hygiene and vandalism, the brief





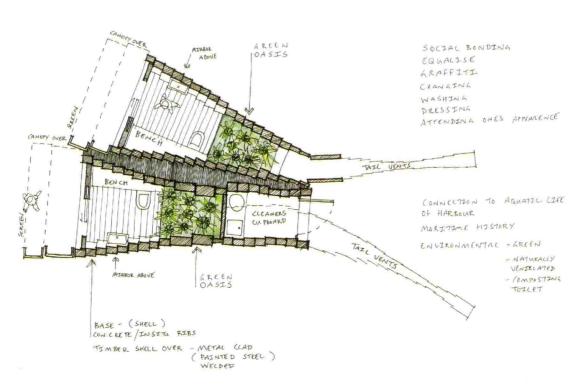




was to create a structure with a sculptural form, something iconic, highly visible and unusual that was also well integrated into the visual and historical context of the surrounding precinct.

To be seen in the round, the design comprises two elongated, irregularly curved forms, instantly recognisable from all key pedestrian approaches and terminating a sequence of spaces and elements along the laneway. These organic forms, eye-catching and instantly memorable, are suggestive of crustaceans or sea creatures, as if the structure was a kind of fossilised husk that had been discovered and inhabited. They recalled the waterfront's shipping past. Along with adding a playful element to its surroundings, this aquatic reference also links back to the origins of the name Kumutoto, a former pa and ancient stream running under the reclaimed land.

Each form contains one accessible public toilet, with one of the two also including cleaning facilities. Their robust concrete construction is appropriate to the surrounding maritime environment. A metal rainscreen, painted the brick red of the neighbouring sheds, ties them into the heritage context and enhances their visibility. While they contrast with the linear architecture of the surrounding buildings, again contributing to their visual distinctness, the curves of the new structure also echo some of the ornate detailing on the nearby sheds. Cantilevered "tails" provide natural ventilation.



此为试读,需要完整PDF请访问: www.ertongbook.com